

AMENDMENT OF THE CLAIMS:

A complete listing of the claims and their status as of this Amendment is as follows:

1.(Previously presented) An impeller suitable for use in a centrifugal pump, for handling liquid mixtures containing particulate solids, the impeller including a front shroud having opposed faces, an outer peripheral edge portion and a rotation axis, a back shroud having opposed faces, an outer peripheral edge portion and a rotation axis, a plurality of pumping vanes positioned between the front and back shroud and extending away from the rotation axis, each pumping vane having an outer peripheral edge portion, and a plurality of auxiliary vanes on the other face of at least one shroud, the auxiliary vanes each having an outer edge portion, wherein the dimension  $D_a$  from the rotation axis to the outer peripheral edge portion of the shrouds is greater than the dimension  $D_b$  from the rotation axis to the outer edge portion of the auxiliary vanes and wherein  $D_a$  is greater than the dimension  $D_c$  from the rotation axis to the outer peripheral edge portion of the pumping vanes and wherein the dimension  $D_a$  of the one of the shrouds is greater than the dimension  $D_a$  of the other shroud.

Claims 2-3 (Cancelled)

4.(Previously presented) An impeller according to claim 1 wherein the auxiliary vanes are located on the other face of one of the shrouds.

5.(Previously presented) An impeller according to claim 1 wherein the impeller further comprises auxiliary vanes being positioned on the other face of each of the front shroud and back shroud.

6.(Previously presented) An impeller according to claim 1 wherein the dimension  $D_a$  of the front shroud is greater than the dimension  $D_a'$  of the back shroud.

7.(Previously presented) An impeller according to claim 1 wherein the dimension  $Da'$  of the back shroud is greater than the dimension  $Da$  of the front shroud.

Claims 8-11 (Cancelled)

12.(Previously presented) An impeller according to claim 1 wherein  $Db$  and  $Dc$  are substantially the same.

13.(Previously presented) An impeller according to claim 1 wherein  $Db$  and  $Dc$  are within 5% of each other.

14.(Previously presented) An impeller according to claim 1 wherein  $Db$  is less than  $0.95 Da$ .

15.(Original) An impeller according to claim 14 wherein  $Db/Da$  is from 0.65 to 0.95.

16.(Original) An impeller according to claim 14 wherein  $Db/Da$  is from 0.65 to 0.9.

17.(Currently amended) An impeller suitable for use in a centrifugal pump, for handling liquid mixtures containing particulate solids, the impeller including at least one shroud having opposed faces, an outer peripheral edge portion and a rotation axis, a plurality of pumping vanes on one of the faces of said at least one shroud extending away from the rotation axis, each pumping vane having an outer peripheral edge portion, and a plurality of auxiliary vanes on the other opposing face of said at least one shroud, the auxiliary vanes each having an outer edge extending axially from said other opposing face of said at least one shroud that is oriented at an angle  $Z$  to a line parallel to the rotation axis and angled downwardly from said opposing face of said at least one

shroud toward said rotational axis, and wherein the dimension  $D_a$  defined by the distance from the rotation axis to the outer peripheral edge portion of said at least one shroud is greater than the dimension  $D_b$  defined by the distance from the rotation axis to the outer edge of the auxiliary vanes, and wherein  $D_a$  is greater than the dimension  $D_c$  defined by the distance from the rotation axis to the outer peripheral edge portion of the pumping vanes.

18.(Previously presented) The impeller of claim 17 wherein said angle  $Z$  of said outer edge of said auxiliary vanes is about  $45^\circ$ .

19.(Previously presented) The impeller of claim 17 wherein said at least one shroud further comprises a front shroud and a back shroud.

20.(Previously presented) The impeller of claim 19 further comprising auxiliary vanes on both said front shroud and said back shroud.

21.(Previously presented) The impeller of claim 19 wherein said front shroud has a diameter  $D_a$  and said back shroud has a diameter  $D_{a'}$ , and the dimension  $D_a$  is greater than  $D_{a'}$ .

22.(Previously presented) The impeller of claim 19 wherein said front shroud has a diameter  $D_a$  and said back shroud has a diameter  $D_{a'}$ , and the dimension  $D_{a'}$  is greater than  $D_a$ .

23.(Previously presented) The impeller of claim 19 wherein said front shroud has a diameter  $D_a$  and said back shroud has a diameter  $D_{a'}$ , and the dimensions of  $D_a$  and  $D_{a'}$  are both greater than the dimension  $D_b$ .

24.(Previously presented) The impeller of claim 17 wherein the dimension  $D_b$  is

approximately the same as the dimension Dc.

25.(Previously presented) The impeller of claim 17 wherein the dimension Db is within 5% of the dimension Dc.

26.(Previously presented) The impeller of claim 17 wherein said dimension Db is between 65% to 95% of the dimension Da of said at least one shroud.